

$h_b(2P)$ $I^G(J^{PC}) = ?^?(1^{+-})$

OMITTED FROM SUMMARY TABLE

Quantum numbers are quark model predictions.

 $h_b(2P)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
10259.8±1.2 OUR AVERAGE		[10.2598 ^{+0.0015} _{-0.0012} GeV OUR 2012 AVERAGE]		
10259.8±0.5±1.1	90k	MIZUK	12	BELL $e^+e^- \rightarrow \pi^+\pi^-$ hadrons
• • • We do not use the following data for averages, fits, limits, etc. • • •				

10259.8±0.6^{+1.4}_{-1.0} 83.9k ¹ ADACHI 12 BELL 10.86 $e^+e^- \rightarrow \pi^+\pi^-$ MM

1 Superseded by MIZUK 12.

 $h_b(2P)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 hadrons	not seen
Γ_2 $\eta_b(1S)\gamma$	(22± 5) %
Γ_3 $\eta_b(2S)\gamma$	(48±13) %

 $h_b(2P)$ BRANCHING RATIOS

$\Gamma(\text{hadrons})/\Gamma_{\text{total}}$	Γ_1/Γ
<u>VALUE</u> <u>EVTS</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
not seen 83.9k	ADACHI 12 BELL 10.86 $e^+e^- \rightarrow \pi^+\pi^-$ MM
$\Gamma(\eta_b(1S)\gamma)/\Gamma_{\text{total}}$	Γ_2/Γ
<u>VALUE (units 10^{-2})</u> <u>EVTS</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
22.3±3.8^{+3.1}_{-3.3} 10k	MIZUK 12 BELL $e^+e^- \rightarrow (\gamma)\pi^+\pi^-$ hadrons
$\Gamma(\eta_b(2S)\gamma)/\Gamma_{\text{total}}$	Γ_3/Γ
<u>VALUE (units 10^{-2})</u> <u>EVTS</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
47.5±10.5^{+6.8}_{-7.7} 26k	MIZUK 12 BELL $e^+e^- \rightarrow (\gamma)\pi^+\pi^-$ hadrons

 $h_b(2P)$ REFERENCES

ADACHI	12	PRL 108 032001	I. Adachi <i>et al.</i>	(BELLE Collab.)
MIZUK	12	PRL 109 232002	R. Mizuk <i>et al.</i>	(BELLE Collab.)

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